Guidance Document for Developing Total Maximum Daily Loads (TMDLs)

Water Cleanup Plans

Revised
June 2002
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Water Cleanup Plans

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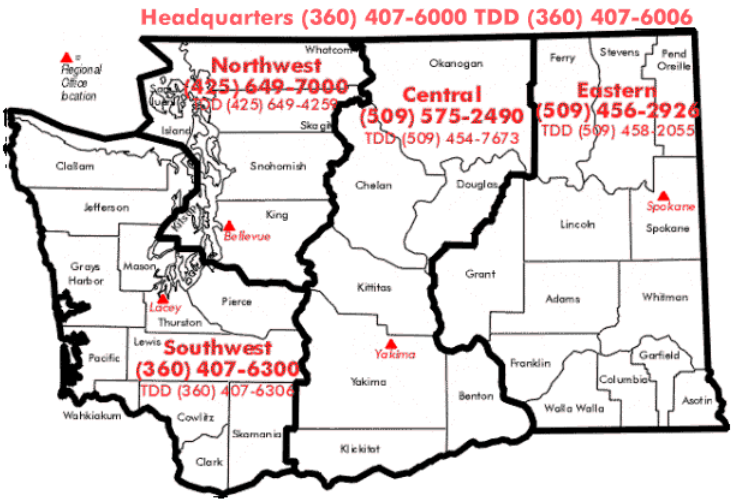

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Introduction

The purpose of this guidance document is to provide a clear description of how to develop, submit, and implement Total Maximum Daily Loads or "TMDLs," which in Washington State are also called Water Cleanup Plans. In this document they will be referred to as TMDLs but the terms are synonymous. TMDLs are required under section 303(d) of the federal Clean Water Act (CWA) for water bodies listed as impaired because they do not meet state water quality standards. Water bodies that are impaired are included on a list called the 303(d) list. The policy (WQP Policy 1-11) for compiling this list was being revised at the time this document was drafted. The new policy recommends a list composed of four categories. Category 5 of this list will be those water bodies which do not meet water quality standards and require the development of a TMDL to address the water quality problem.

This guidance is based on TMDL requirements of the federal CWA and the January 1998 TMDL Memorandum of Agreement between the Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA). Per this agreement Ecology has agreed to have TMDLs in place for over 1500 water quality impairments by 2013. For more information see the following webpage: http://www.ecy.wa.gov/programs/wq/tmdl/303moa12.pdf

A TMDL (or Water Cleanup Plan) is a common-sense, science-based approach to cleaning up polluted water so that it meets water quality standards. TMDLs involve an initial assessment of the water quality problems, a technical analysis to determine how much pollution must be reduced to protect the water, the selection and implementation of appropriate water quality improvement and/or control measures, the submittal for EPA approval and follow-up monitoring to determine the success of the complete effort. (TMDL development is also guided by 40 CFR part 130.7 and EPA guidance and rules.)

Certain essential elements must be included in every TMDL to ensure that the resulting plan will be complete, be acceptable to the public, and be approved by EPA. These elements are:

- a technical study identifying the pollutants causing the water quality problem and the sources of those pollutants;
- public involvement at all key decision steps of the process;
- wasteloads or load allocations for pollutant sources which distribute allowable levels of pollutant discharges among contributing sources;
- a margin of safety to ensure water quality standards will be met under the worst conditions likely to be experienced;
- population growth factor to ensure the allocations will continue to be adequate for more than the immediate time period;
- a consideration of seasonal variation of flows and contaminant concentrations, (WQ standards must be met during all seasons of the year);
- an implementation strategy to prevent, reduce or clean up excess pollution;
- a follow-up monitoring plan to demonstrate success of pollution controls contained in the implementation plan or the need for additional action;

- an administrative record;
- reasonable assurances for the success of the implementation plan;
- an estimate of when the waterbody will meet standards;

Individual attention must be given to tribal governments with reservation land or with treaty interests in the affected basin. Ecology has not been delegated Clean Water Act programs within Indian reservations or on off-reservation tribal trust land. State water cleanup plans will not apply to these tribal lands without agreement from the tribe and EPA. A number of tribes within the state have received or are in the process of receiving "treatment as a state" status from EPA for the purpose of setting water quality standards. EPA approved tribal water quality standards may differ from state standards and should be taken into account within the TMDL. Where tribes have not been delegated programs under the Clean Water Act, EPA retains jurisdiction. Tribal governments may also have laws under their independent authority for managing water quality within reservations. In addition, most of the 28 tribes within the state have off-reservation treaty reserved rights for fishing and hunting throughout the state. Early consultation with tribal governments is the best way to ensure a cooperative and coordinated state/tribal/federal approach to water quality and TMDLs.

In addition, public involvement is a vital part of every TMDL. In most cases, the public must develop the real solutions to improving water quality. Early identification and contact with those entities that are most affected and involved is strongly recommended. Ecology has created an Environmental Justice (EJ) Checklist to aid staff in planning public outreach. The EJ Checklist and other resources are available on the agency sustainability intranet site (http://ecy-hqapp10/Sustainability/index.htm) and a copy is in Appendix B of this document. Consideration should be given to providing all interested parties with information throughout all phases of the project, from start-up through implementation and effectiveness monitoring. Begin with basic explanations of a TMDL, its purpose, sequence, timing, implications, and projected schedule. Later, provide technical findings as they are developed. Finally, engage the public in the design of water quality improvement strategies. The implementation phase will be greatly enhanced with the cooperation of the affected public.

Ecology has created an agency policy that will outline a dispute resolution process. When and if the public disagrees with a technical decision or process on a TMDL project, the public may request a review by Ecology. This new policy will describe a process for this review.

TMDL Workload Model: The Water Quality Program (WQP) developed a TMDL workload model in May 2001, titled: Final Statewide 303(d) Workload Assessment, publication # 01-03-018. This model assesses the state's ability to comply with the 15 year schedule of the MOA with the EPA.

Accountability Team: The development of the Accountability Team (A-Team) is a recommendation of the May 2001 TMDL 303(d) Workload Assessment. The Team meets on a quarterly basis to review TMDL progress and to address statewide TMDL policy and workload issues. WQP coordinator at Headquarters (HQ) and the WQP/Environmental Assessment Program (EAP) unit supervisors will meet to do a project by project review to determine if Ecology is on schedule and if not why not. The unit supervisors and the WQP HQ coordinator

will keep the A-Team up-to-date on progress and issues. The A-Team consists of EAP Section Managers and Water Quality regional section managers. The A-Team is convened by the HQ Watershed Management (WM) Section Manager.

Tracking: The scheduling and progress of TMDLs are tracked by the HQ WQP coordinator. Currently an Excel spreadsheet and Word tables are the primary tracking tools. These should be replaced by a database in FY03. The program manager and section supervisors track results and projections every quarter via conference call.

Document Organization

This guidance document contains a series of sequential steps leading from the initial determination that a TMDL (Water Cleanup Plan) for a specific body of water is a priority project, through eventual implementation of pollution reduction strategies and follow-up monitoring. Steps are described in a) Narrative form, b) Checklist, c) Tables, and d) examples and guides in appendices. In the narrative section individuals ultimately responsible for the activity are in parentheses. WQ lead is the WQ program's TMDL lead assigned to the project. EAP lead is the person from the EA program that is conducting the study or in the case of team efforts the person coordinating the team. The PI person is the WQ program's staff member that is designated for education and outreach related to TMDLs. For regions without a designated public involvement (PI) team member, the steps identified for the PI person become the responsibility of the WQ lead.

Although each TMDL project is a unique experience there are numerous common elements to every TMDL. What follows in this document is a model and outline for a process that can be adapted to individual projects. When beginning a TMDL project, choose the pieces from this model that are appropriate, developing a specific strategy for each TMDL project. The strategy should be a planning tool for the project team and a communication tool among the team members and between the team and management. Not all of the steps included in this guidance document will be required for every TMDL. Some of the steps are strongly recommended even though they are not required, and others are optional. Optional steps are either titled "optional" or shown as shaded. The recommended sequence should be modified to fit the needs of each specific TMDL project. It is not the intent of this guidance to provide details for each step.

The focus of this guidance is on the traditional form of TMDL development where the Department of Ecology performs the technical studies. Other approaches include Watershed Analysis done by the US Forest Service or private timber companies and work done through partnerships between Ecology and local government, or other groups established to accomplish watershed planning and restoration, or as part of salmon restoration plans. All of these planning processes are valuable since they focus on cleaning the waters. More information on these and other planning processes can be found in **Planning As Process: A Community Guide to Watershed Planning** ***(Ecology Publication 99-01-WQ on WQP website)***. However, only a TMDL places a load allocation on each pollutant. Load allocations are limits on point or nonpoint sources of pollution that if implemented, will allow the waterbody to assimilate a pollutant and still maintain water quality standards. As long as the essential elements described

here are included, each of these processes could result in an approved TMDL. The process described in this guidance will also be helpful for these approaches. Community members and organizations can participate in TMDLs in many ways; however, only Ecology can submit a TMDL to EPA. Consequently, all partnerships need technical assistance from Ecology to ensure a product that can be submitted as a TMDL. A key is to design a monitoring plan so that data gathered fits the model used to determine the load allocation.

The five appendices to this document provide additional helpful information, samples of the documents referenced in the text, and a workbook section that can be used to customize this guidance document to each TMDL. An intranet site or public folder will be developed.

Watershed Approach to Water Quality Management

Ecology will use its Watershed Approach to Water Quality Management to implement the TMDL program. In this approach, both point and nonpoint source pollution problems and needs are addressed for all watersheds of the state on a cyclical, sequential basis.

The cornerstones of Ecology's approach are the designation of Water Quality Management Areas (WQMAs), the appointment of an Ecology staff watershed/TMDL lead for each WQMA, and a **five-step (five-year) process for systematically assessing water quality conditions**. This includes developing and implementing TMDLs, issuing permits, and undertaking other point and nonpoint source pollution prevention and control activities.

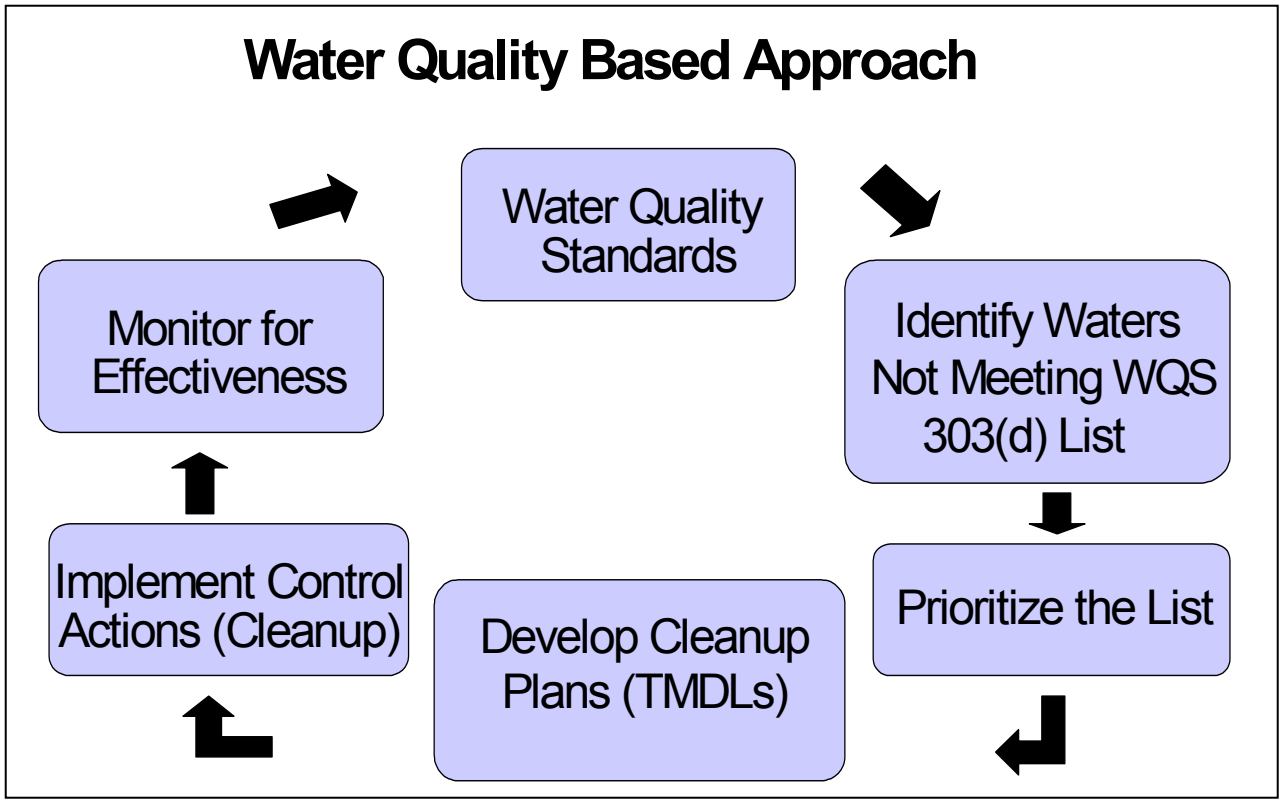
Ecology aggregated the state's 62 defined Water Resources Inventory Areas (WRIAs), which are the state's major watersheds, into 23 water quality management areas (WQMAs). Ecology has four regional offices located throughout the state. Each region has approximately five WQMAs within its boundaries with the exception of Eastern Regional Office, which has eight WQMAs.

Five-Step, Five-Year Cycle: Ecology will address each of the 23 WQMAs within the Watershed Approach. Each year, Ecology will begin the five-year cycle for four or five WQMAs. Within each cycle, there are five steps with each step consuming about one year. The steps are briefly described below:

Year 1	SCOPING: Identify and prioritize known and suspected water quality issues within the WQMA by assembling information from extensive community involvement and internal Ecology staff records and reports, including the 303(d) list, status of new and old TMDLs, and other priority WQ issues. Develop a priority TMDL list.
Year 2/3	DATA COLLECTION AND ANALYSIS: EAP develops Quality Assurance Project Plans (QAPPs) for TMDLs. Conduct water quality monitoring, special studies, facility inspections, and other general research. Develop technical basis for TMDLs.

Year 4 WQMA PLAN OF ACTION: Issue draft TMDLs for public comment and subsequent submittal to EPA. Summarize strategies and management activities needed to implement TMDLs with stakeholders, issue or reissue waste discharge permits, form partnerships, and address funding issues. Submit final TMDLs and summary implementation strategies to EPA.

Year 5 IMPLEMENTATION: Implement TMDLs, issue or reissue waste discharge permits, and work with local, state and federal programs, and partners to develop a detailed implementation plan, and implement nonpoint pollution prevention and control activities.



TMDLs are all about meeting water quality standards.

- Section 303 (d) of the Clean Water Act requires us to list impaired water bodies.
- We must prioritize impaired waterbodies and submit the list to EPA for approval.
- If the waterbody does not meet standards we must initiate a TMDL.
- The TMDL detailed implementation plan should implement pollution controls.
- Effectiveness monitoring should be reviewed and followed.
- If the waterbody is not meeting standards, adaptive management is used to design new or more stringent controls.

Water Quality Management Areas Map – next page


Nooksack/San Juan
1
WHATCOM
SAN JUAN
2
3
4
Skagit/Stillaguamish
SKAGIT
ISLAND
5
6
19
20
CLALLAM
18
Eastern Olympic
17
JEFFERSON
Western Olympic
21
16
KITSAP
15
Kitsap
8
7
Island/Snohomish
KING
SNOHOMISH
GRAYS HARBOR
22
MASON
14
12
13
South Puget Sound
PIERCE
10
11
THURSTON
24
23
PACIFIC
LEWIS
26
Lower Columbia
WAHKIAKUM
25
COWLITZ
SKAMANIA
27
Columbia Gorge
CLARK
28
29
30
KLICKITAT
Horseheaven/Klickitat
31
YAKIMA
37
Lower Yakima
BENTON
Upper Yakima
38
39
KITTITAS
Cedar/ Green
9
Okanogan
48
OKANOGAN
49
47
CHELAN
46
45
Wenatchee
50
DOUGLAS
44
42
43
LINCOLN
Crab Creek
GRANT
41
Mid Columbia
ADAMS
40
Esquatzel
36
FRANKLIN
33
Lower Snake
WALLA WALLA
32
COLUMBIA
GARFIELD
35
ASOTIN
34
WHITMAN
Upper Snake
60
61
Pend Oreille
PEND OREILLE
62
PERRY
STEVENS
59
52
Upper Columbia
58
51
53
54
55
Spokane
SPOKANE
57
56
Water Quality Management Areas
Scoping Year – Impl. Year
(FY) 1998 02
(FY) 1999 03
(FY) 2000 04
(FY) 2001 05
(FY) 2002 06
= WRIA-Id Number
ECOLOGY
GIS Technical Services
06/09/99

TMDL Project: _____ Date submitted to EPA _____
Parameters: _____ Date approved by EPA _____

Outline & Checklist for TMDL Process

	Target Date	Completed Date
Year 1:		
Identify Priority Areas in Scoping Watersheds		
1. Form Scoping Team for WQMA	_____	_____
2. Identify internal & external participants	On-going	On-going
3. Involve tribes, public and affected agencies early	On-going	On-going
4. Internal Scoping Workshop	_____	_____
5. Prepare EAP project request forms	On-going	On-going
6. EAP coordinates with WRMT & WQP	_____	_____
7. EAP drafts priority list & gives to HQ TMDL Coordinator	_____	_____
8. Develop Draft Priority List	_____	_____
9. Public comment period	_____	_____
10. Receive comments, revise List	_____	_____
11. Publish Final TMDL Priority List for EAP		
12. Establish Administrative Record for project	_____	_____

	Target Date	Completed Date
Years 2/3:		
Design & Carry out the TMDL Study		
1. Begin an Administrative Record	_____	_____
2. Contact any potentially interested tribes	_____	_____
3. Form core TMDL team (internal)	_____	_____
4. Identify and contact EPA reviewer		
5. Internal kickoff meeting	_____	_____
6. Develop internal public involvement and information strategy	_____	_____
7. EAP designs QAPP	_____	_____
8. Regional WQ makes external contacts	On-going	On-going
9. Team holds external kick-off meeting	_____	_____
10. Form local advisory group	_____	_____
11. Review of Draft QAPP	_____	_____
12. Revise and Finalize QAPP	_____	_____
13. Set dates for TMDL	_____	_____
14. Conduct TMDL Study (EAP) Begin:	_____	_____
15. EAP updates TMDL team on process	On-going	On-going
16. Engage public during study Begin:	_____	_____
17. Prepare draft technical report (EAP)	_____	_____
18. Maintain or initiate advisory group	_____	_____

19. If appropriate, begin draft submittal report & SIS _____ _____
20. Review technical report (peer and advisory group) _____ _____
21. Finalize technical report and publish it _____ _____
22. EAP develops follow-up & effectiveness monitoring plan_____ _____

	Target Date	Completed Date

Year 4:
Develop TMDL/ Water Cleanup Plan

1. Reorganize advisory group if necessary _____ _____
2. Continue to update mailing lists, external contacts On-going On-going
3. Update project/outreach strategy _____ _____
4. Complete and/or draft SIS
5. Develop submittal report _____ _____
6. Public comment on submittal report _____ _____
7. Responsiveness summary
8. Document public review in submittal report _____ _____
9. Finalize & submit TMDL submittal report to HQ _____ _____
10. HQ reviews submittal report & develops submittal package _____ _____
11. Publish and submit complete TMDL package to EPA _____ _____
12. Pull together the Administrative Record _____ _____
13. EPA approves TMDL and WQ announces _____ _____
14. Develop detailed implementation plan (DIP) _____ _____
15. Public Comment on draft DIP if needed _____ _____
16. Publish and distribute final DIP _____ _____
17. Submit DIP to EPA _____ _____

	Target Date	Completed Date

Year 5:
Implement the TMDL and Follow-up (Effectiveness) Monitoring

1. Implement DIP point source pollution controls _____ _____
2. Implement DIP nonpoint source pollution controls _____ _____
3. Implement effectiveness monitoring plan _____ _____
4. Reevaluate water quality after TMDL implementation _____ _____
5. Apply adaptive management as needed _____ _____
6. Publicize successes _____ _____
7. Achieve water quality standards _____ _____

Identify Priority Areas for Development of Water Cleanup Plans in Scoping Watersheds

Under the Memorandum of Agreement (MOA) signed by EPA and Ecology in 1998, waterbody segments and associated parameters originally on the 1996 303(d) list, and still on category 4 of the 2002 303(d) list, must have TMDL studies completed by the year 2013. The MOA provides a watershed-based process to schedule TMDLs along with a list of specific considerations to determine the highest priority projects.

Between the 2002 list and the MOA date of 2013, Ecology will complete two full rotations through the five-year watershed cycle. This will provide two periods for scoping and re-prioritizing TMDL schedules in each WQMA watershed in response to new information and opportunities. Some TMDLs will be developed out of cycle based on a threat to public health such as drinking water, ESA issues or unique opportunities to coordinate with other efforts (such as watershed planning processes or private initiatives). Out of cycle TMDLs may also be done by Ecology to better distribute work over the years.

The primary criteria used to make initial prioritization decisions are as follows:

(1) vulnerability of water bodies to degradation
(2) risks to public health including drinking water, aquatic life and other water-dependent wildlife, including threatened and endangered species

Additional priority setting factors that may be considered on a case-by-case basis are listed below:

(3) other designated uses
(4) timing of grant and loan projects
(5) discharge permit issuance and renewal
(6) FERC hydroelectric project re-licensing schedules
(7) existing water quality management plans
(8) public interest and support
(9) priorities from other planning processes, including section 319 and 2514 Watershed Planning
(10) ecology short-term programmatic needs and resources
(11) technical feasibility
(12) judicial orders and decisions
(13) national policies and priorities
(14) likelihood of success
(15) opportunities for pollution prevention

Steps for the Scoping Year – Year 1

The purpose of scoping a WQMA is to review the region in detail, manage current and projected TMDLs, and identify other priority water quality issues. Each year Ecology identifies the water bodies where the agency will initiate TMDLs.

1. **Form a scoping team**– may evolve into the team in the next section – year 2. (WQ lead, PI person, EAP, tribes, EPA)

2. **Identify internal and external participants**. (WQ lead & PI person)

3.Early-on involvement with the tribes, public and affected agencies to facilitate later community work. Conduct workshops or hold individual meetings with selected individuals, local groups, and tribes. Determine water quality priorities. (WQ lead & PI person)

4. **Hold internal scoping workshop** with headquarter TMDL coordinator (currently Ron McBride) – usually held October or November – see sample agenda. (WQ lead)

5. **Develop EAP FYxx project request forms.** (WQ lead)

6. **Present to EAP during annual visits to regions** (Jan-Feb) – WRMT meeting. (WQ lead)

7. **EAP drafts priority list & gives to HQ TMDL Coordinator.** (EAP)

8. **Develop draft List of Priority Water Bodies** (those scheduled to begin work in the next fiscal year). HQ staff develops statewide list for public review from the list EAP provides.
   - Public Comment Period (conducted by HQ staff)

Priority List Public Comment Process (conducted by HQ staff)

Required Steps:

1. Focus sheet (send to project mailing lists, use as handout)
2. Public involvement calendar (when it's developed)
3. 30 day comment period
4. Develop response to comments
5. Mail response to all commentors
6. Publish in state register
7. Newspaper ads (public notice of comment period)
8. News release - PIO

Optional Steps:

1. Present draft list at advisory group meetings, watershed planning unit meetings, focused meetings – growers, industrial dischargers, city council/county commissioners, local community presentations
2. Establish information centers where documents are available to public (local libraries, community centers etc. Sometimes the local watershed council or environmental groups, CDs will serve as an information center). These can be permanent information centers for

the life of the project – where we place successive and supporting documents, focus sheets etc.

9. **Receive comments, revise Priority List if necessary, write responsiveness summary.** (HQ TMDL coordinator)

10. **Publish final List of Priority Water Bodies.** (HQ TMDL coordinator)
    - Focus sheet
    - News release

11. **Establish administrative record. (**HQ TMDL coordinator)

Design & Carry out the TMDL Study – Year 2 & 3

This section covers the steps that would most likely occur following the scoping year. In the 5-year approach this will take place during years 2 and 3. During this period EAP staff designs the Quality Assurance Project Plan (QAPP), conducts the technical study, defines the problems and potential solutions, and writes the technical report. Water Quality staff identifies interested and affected parties to involve in the design and review of QAPP and technical report. WQ staff works with these interested and affected parties to determine local concerns that should be incorporated into the QAPP and the technical study. WQ staff identifies existing groups and activities within the watershed that may lead to cooperative efforts in achieving clean water.

1. **Begin administrative record.** (WQ lead)

2. **Contact any tribes** that may have interests in the waterbody(ies) under study. (WQ lead) Tribes can be important partners at different stages of the TMDL. In addition to the authorities and rights mentioned in the introduction, an area tribe may be involved in studies related to the TMDL and tribal members or employees often have strong working knowledge of the local waterways. Remember to consider reservations, ceded land, and usual and accustomed fishing and hunting rights. Ecology has GIS layers showing the location of Indian reservations and ceded land. For help identifying affected tribes, contact Tom Laurie, Government Liaison, 360/407-7017. *See suggested letter, Appendix* F.

3. **Form core TMDL team.** (WQ lead) The team is the real front line – staff involved in all critical decisions and details about how to conduct the planning process, who will take direct responsibility for the TMDL tasks.

   Required team members:
   -WQ lead
   -WQ Public Involvement person
   -EAP lead or team
   -EPA review – High/Medium involvement

   Optional team members:
   -WQ point source staff
   -Tribes
   - Ecology watershed planning 2514 lead
   - Enforcement staff
   - EPA reviewer - Low involvement

   Note roles of PIO and PI person:
   Public information officers (PIO) - one in each region - deals with the media – TV, newspaper and radio; write news release, communication strategies, and key messages.
   Public involvement person (PI) - coordinate with the PIO, support regional leads, design strategies and activities that get the public to participate in the process.

4. **Identify and contact EPA reviewer** if not already contacted. (WQ lead)

5. **Internal kickoff meeting**. (WQ lead) sWQ lead and PI person organize and plan. Attended by core TMDL team. Invite optional team members (see above). *See sample agenda in Appendix D*

6. **Develop internal strategy** document for this project. (WQ lead & PI person) – *see sample in Appendix D*

Within this strategy the following actions should be considered:

- Identify general approach and objectives
- Identify advisors, resources, and interested parties – (WQP staff in regions, regional PIO, local governments, EPA, local organizations, GIS, other agencies, universities, etc.)
- Identify existing groups, 2496, 2514 watershed planning unit, Conservation districts, players, and activities. What local efforts can we support and build on? Is there local data from agencies and volunteer monitors?
- Develop tentative timeline and schedule for study and assign tasks
- Define audiences, public, local concerns
- Start building mailing lists (Work actively on this through the life of the project through personal contacts, focus sheets, etc.)

Possible Mailing lists:

a. Inner core – Ecology staff, tribes, EPA
b. Affected & interested parties- representatives from various groups and individuals
c. General public
d. Statewide list – people who want to know everything such as Northwest Environmental Advocates (NWEA)
e. Newsletters of interested groups

7. **DRAFT Quality Assurance Project Plan (QAPP).** (EAP lead) The preparation of a QAPP helps focus and guide the planning process and promotes communication among those who contribute to the study. It also shapes the timeline for the TMDL completion since it sets the completion date for the technical report. EAP should maintain contact with Water Quality staff during the QAPP design and build in the local concerns and knowledge provided by Water Quality staff, local technical advisors, and interested tribes. EAP requests local and historical data and input from agencies and volunteer monitors. Final QAPP date is set through scope of work assessment.

8. **Make external contacts.** (WQ lead & PI person) This happens concurrently with EAP's QAPP Design.
   - Maintain contact with the tribes
   - Make initial informational contact with (add and delete as needed):
     - County commissioners
     - City & county officials, planners, public works departments
     - Conservation districts (CDs)
     - Irrigations districts
     - Affected businesses (wheat farmers, oyster growers, cattle ranchers, dairies)
     - 2514 groups
     - Watershed groups
     - Environmental Groups
     - Local health departments

- Point source dischargers
- Legislators
- Other state and federal agencies (DOT, NMFS, USF&W, USFS, WDNR, WDFW, NRCS)
- Local land owners (public and private)

- Conduct informal survey in watershed – *samples in AppendixD*
  - What's already being done to improve water quality?
  - How do they want to be involved?
  - Who else do we need to contact, put on the mailing list?

  (Refine strategy based on survey if necessary)

- Focus sheets, news releases, web page

9. **Team holds external kick-off meeting.** (WQ lead & PI person) Public meeting held to inform local interested and affected parties about the upcoming project. Involve appropriate Ecology staff. WQP lead gives "TMDL 101" presentation, EAP presents draft QAPP. See sample agenda in appendix D.

10. **Form local advisory group.** (WQ lead) Use existing groups when appropriate – (i.e. watershed group, 2514). This group may be formed as early as the development of the QAPP but often not until after the technical report is published. This depends on the individual TMDL.

    - Clearly define roles and responsibilities – what, who, how, why, when, where
    - Send invitation letters identifying value of participation and commitment needed – see sample in appendix D
    - Pull locals together to respond to and discuss TMDL objectives, proposed process, timeline, QAPP, and start planning – future DIP
    - Define goals and schedule of meetings
    - Participants list should look similar to the list above for initial informational contacts (#8)
    - Assure that workgroup participants will participate through the process and report back to who they are representing (decision-makers, managers, constituents, etc.) Consider an informal contract (cooperative agreement) between Ecology and the participants that will assure that each will report back to and bring input from their organization/interest group
    - Advisory group will advise and make suggestions on the outreach and public involvement needs throughout TMDL process
    - Take minutes at advisory group meetings – provide summary/update reports to interested people and on website. Minutes must be kept for the Administrative Record
    - Consider bigger group meeting periodically with managers/decision-makers

11. **Review of Draft QAPP.** (WQ lead)

    The review of the draft QAPP is typically **NOT** a formal public comment period. It is usually reviewed by groups that have specific interest in how the study will be conducted:

    - EPA reviewer
    - WQ and other Ecology staff
    - Other agencies and groups conducting studies in the region
    - External peer review (academic researchers, local consultants)
    - Tribes
    - Technical workgroup or advisory group (advisory group members should also present the QAPP to those they are representing if there is interest and also advise on outreach and public involvement needs for their community)
    - Other local governments (city council, county commissioners)

12. **Revise QAPP** & **Finalize QAPP.** (EAP lead)
    - Respond to individual comments if necessary
    - Revise QAPP in response to comments
    - Obtain signatures from appropriate people
    - Announce it by mailing to appropriate mailing lists
    - Distribute final QAPP, which sets firm dates for draft and final technical report
    - News story
    - Focus sheet
    - Place in information centers
    - On the web

13. **Set dates for TMDL.** (WQ & EAP leads)

14. **Conduct the study.** (EAP lead)
    - Communicate with WQ staff for coordination, schedule updates and changes, and local contacts
    - Work with cooperators (locals, volunteers, tribes, other agencies)

15. **EAP updates TMDL core team on progress of study.** (EAP lead)
    - EAP unit supervisor contacts WQP regional unit supervisor as soon as a delay is anticipated
    - If projects are going to be delayed, submit project Change Forms must be submitted to the WQ lead and section manager
    - Notification of schedule changes should be made as early as possible

16. **Engage public during study.** (WQ lead & PI person)
    - Involve or update tribes on regular basis
    - Involve or update EPA during study

- Maintain advisory group and inform them of evolving activity and findings
- Periodically update the community about the project during this time (every – 6 months) to keep them engaged
  - Mail Ecology focus sheet to the mailing list
  - Provide information through a CD newsletter or watershed council
  - newsletter
  - Use a Listserve or a web page

- Engage public in process
  - field trip
  - observe sampling
  - volunteer monitoring
  - educational workshops focused on presumed remedies

- Coordinate media opportunities, photo opportunities of water sampling

17. **Prepare draft technical report.** (EAP lead)
    - QAPP can be used as a template for the introduction, problem statement, history, methods, etc
    - Quality assurance, quality control check
    - Mathematical modeling
    - Data analysis
    - Limits/Allocations
    - Conclusions & Recommendations

18. **Maintain and/or initiate advisory group.** (WQ lead) This timing may vary.

19. **Review of draft technical report.** (WQ lead)
    - Have co-workers and supervisors review technical report and if appropriate, incorporate comments
    - Have regional TMDL staff review technical report and if appropriate, incorporate comments
    - Present draft technical report to the local advisory or technical work group and if appropriate, incorporate comments
    - External peer review (academic researchers, local consultants)
    - Present draft technical report at additional non-Ecology meetings as appropriate such as: watershed planning, EPA, tribal, growers, industrial dischargers, local community groups
    - Use draft technical report to begin building SIS if appropriate
    - Advisory group solicits comments (from public or their organization)
    - Hold public workshops
    - Make report available at information centers and on website

20. **Begin or continue drafting submittal report and summary implementation strategy (SIS).** (WQ lead) See samples in appendix D.

21. **Finalize technical report.** (EAP lead)

- Revise in response to comments
- Publish final technical report
- Set submittal date about six months out – flexible with project
- Announce by mailing, focus sheet (show how information will help managers target activities in the future), press release, etc.
- Place report in information centers and on the web

22. **Design follow-up and effectiveness monitoring program.** (EAP lead)
Follow-up and effectiveness monitoring are an integral part of the TMDL implementation and DIP implementation. It provides local managers with a sense of costs, resources needed, and how implementation and water quality improvement are progressing. It should also determine if water quality standards are met at the locations of the original listings that led to the TMDL study. Design should flow from the QAPP for the effectiveness monitoring program**.**

Develop TMDL/ Water Cleanup Plan – Year 4
(Summary Implementation Strategy, Submittal Package, Detailed Implementation Plan)

This section corresponds to year 4 in the 5-year approach. The TMDL(s) for a water body will be prepared in three steps:

Step one is the preparation of the TMDL submittal package composed of the technical report, public involvement, and the submittal report which includes the summary implementation strategy (SIS). The TMDL submittal package is submitted to EPA for approval.

Step two is the implementation of the TMDL. It begins with the preparation of the detailed implementation plan (DIP) during the year following EPA's approval of the TMDL. On the ground implementation can begin throughout the process.

Step three is the evaluation of effectiveness of DIP implementation which determines the need for Adaptive Management. Completion occurs upon meeting Water Quality standards.

Definitions and Explanations:

- Summary Implementation Strategy (SIS): The purpose of a SIS is to outline strategies that upon implementation will result in the waterbody meeting water quality standards. The SIS is a component of the TMDL submittal report submitted to EPA for approval. The SIS is a clear, concise, and sequential presentation of the concept or vision of how to attain the pollution allocations stated in the TMDL technical report and upon implementation will result in meeting water quality standards. Development of the SIS involves consultation with tribes, technical advisory committee, and communities and must reflect the findings of the TMDL study.

- TMDL Submittal Report: The submittal report is prepared by the WQP TMDL lead. It begins shortly after the final technical report is completed. The prepared SIS is included as part of the TMDL submittal report. Elements of the TMDL submittal report include:

    - Implementation overview (may include reasonable assurances)
        - Components of TMDL submittal report
        - Introduction (CWA mandates, WA WQ standards, purpose)
        - Background (location and history)
        - Applicable water quality standards
        - Impairments
    - Seasonal Variation
    - Technical Approach (i.e. study, modeling, etc.)
    - Loading Capacity
    - Margin of Safety
    - Wasteload and Load Allocations
    - SIS

- Implementation Activities
- A strategy monitoring the effectiveness of the project(s) (EAP)
- Potential funding sources
- Reasonable assurances
- Adaptive management
- Summary of public involvement
- Estimated date when waterbody(s) will achieve standards
- Appendices
  - Public involvement materials
  - Responsiveness summary to public comments
  - Technical report, including QAPP (published by EAP)

❑ Submittal Package. This package is submitted by HQ Coordinator to EPA and includes the submittal letter and the TMDL submittal report.

❑ The Detailed Implementation Plan (DIP). The DIP is prepared after EPA approves the TMDL. This will be the completed cleanup plan referred to below.

At this point, a clear vision of the implementation strategies and activities packaged into the SIS should be the foundation for the detailed implementation plan developed after EPA approves the TMDL. Keep in mind a more detailed SIS will mean less time needed on the DIP.

The process which began with the public review of the draft technical report and development of the SIS and submittal report should flow into the work involved in developing a DIP. The DIP must be developed during the year following the EPA approval of the TMDL. Like the SIS, the DIP will require discussion with local agencies, communities, and tribes. The objective is to produce a plan that reflects the schedule and commitments of tribes, communities and agencies regarding the specific actions they are committing to undertake to implement the TMDL load allocations.

Steps to Develop a SIS, Submittal Report, Submittal Package and DIP

(Steps to Develop a Summary Implementation Strategy (SIS), Submittal Report, Submittal Package, and Detailed Implementation Plan (DIP**)**)

1. **Reorganize advisory group.** (WQ lead) Some participants may want to leave the group whereas others may want to become involved at this point.

2. **Continue to update mailing lists, make contacts and contact interested and affected parties.** (WQ lead & PI person)

3. **Update internal outreach strategy**, if necessary. (WQ lead & PI person)

4. **Continue and/or draft the summary implementation strategy** (SIS). (WQ lead)
    - Begin development as soon as draft technical report is received
    - Ecology and advisory group develop, evaluate, and select preferred cleanup strategies
    - The strategy should identify commitments needed to achieve the water quality goals for the project
    - EAP lead/team meet with TMDL lead and/or advisory group to address how recommendations from the technical report can be incorporated into the SIS and DIP
    - The SIS should be the foundation for the detailed implementation plan – who's doing what by when
    - Advisory group workshops to help review draft SIS
    - EPA reviewer, appropriate WQP and EAP staff and managers review SIS
    - External peer review (Academic researchers, local consultants)

5. **Develop submittal report** (see example in Appendix D). (WQ lead) The report includes the items listed under definitions and explanations above.
    - Comments received on the published technical report can be addressed either in the responsiveness summary included as an appendix or in the SIS
    - Regional TMDL lead writes the submittal report
    - Regional PI person reviews and edits
    - Regional secretary may format, proof read, and finalize (alternately the TMDL team may take on that function)
    - TMDL HQ coordinator reviews draft for content

6. **Public comment period** on the submittal report which includes the technical study with SIS. (WQ lead & PI person)
    - Make final draft submittal report (with SIS) available
    - Make final technical report available
    - Ask for local advisory group volunteers to continue for implementation (DIP)stage
    - Hold public meeting, with EAP and advisory group on the agenda, to explain the technical report, SIS, and submittal report

Copies needed – distributed by regional WQ lead
Send to HQ TMDL coordinator

15 - Ecology Library
5 - State Library
2 - EAP
13 -TMDL coordinator
1 – Nina Bell
As needed in region

SIS Public Comment Process

Required steps:

1. Focus sheet (send to project mailing lists, use as handout)
2. Newspaper ads (public notice of comment period)
3. News release (at recommendation of PIO)
4. Public involvement calendar (when its developed)
5. Public meetings
6. 30-day comment period
7. Response to comments
8. Mail response to all commentors

Optional Steps:

1. Present draft technical report at local technical workgroup meetings, watershed meetings, focused meetings – growers, industrial dischargers, city council/county commissioners, local community presentations
2. Establish information centers where documents are available to public (local libraries, community centers, and offices of local watershed councils, environmental groups, Conservation Districts). These can be permanent information centers for the life of the project – where we place successive and supporting documents, focus sheets etc.
3. Consider establishing a website for the project (i.e., an electronic information center), that we can build on during the life of the project. Diane Dent does this for us in the program.
4. Workgroup solicits public comments

7. **Develop responsiveness summary.** (WQ lead)

8. **Document public review in submittal report.** (WQ lead)

9. **Send complete submittal report to the HQ coordinator.** (WQ lead) It consists of a Technical report and a final submittal report including a responsiveness summary following the public comment period.

10. **Review submittal report and develop submittal package.** (HQ TMDL coordinator) Review and finalize formatting and send camera ready file to copy center for publication, and distribute copies and submittal to EPA. Prepare submittal letter.

11. **Submit TMDL to EPA**– See Sample. (HQ TMDL coordinator) TMDL submittal report is sent with a submittal letter and contains: technical report, SIS, summary of public involvement, monitoring plan, news release, QAPP, response to comments, administrative record, and other supporting documents.
    - Place on website
    - Notify/or send copies to advisory group
    - Place submittal package in information centers

12. **Pull together administrative record.** (WQ lead & PI person)

12. **EPA approves TMDL and WQ announces.** (WQ lead & PI person) Under federal regulations EPA must approve or disapprove the TMDL within 30 days. If EPA does not approve the TMDL, they will either return it for adjustments or EPA will need to prepare a new TMDL within 30 days.
    - Notify advisory group
    - Begin developing DIP
    - Send approval info to regional PIO who writes press release
    - Announce by focus sheet
    - Announce on website

14. **Develop detailed implementation plan** (DIP) *(see example in Appendix D)* (WQ lead) The DIP describes the specific internal and external commitments needed to reach water quality standards, and possible funding sources. It describes and schedules who will take specific actions and timeframes for achieving the results.
    - Continue work started earlier by local advisory group –
        - Reorganize advisory group if necessary (may need to broaden to include decision-makers, community, etc
        - Consult with tribes
        - Get 1-year commitment from participants for DIP work
    - Define a schedule of actions – what, timeline, who, why (*see Appendix D*)
    - Define detailed implementation strategies including players involved, resources needed, etc
    - Define how we evaluate the success of implementation
    - Highlight ongoing efforts in the community - local education efforts, grant projects, farm plans, stream team, etc
    - Design tracking system to track progress being made by each stakeholder

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15. **Public comment period on the draft DIP.** (WQ lead & PI person)
    Extent of public comment needed depends on project – optional steps:
    - Distribute to interested and affected parties and tribes
    - Hold a public meeting with the advisory group to explain and present the DIP
    - Hold a general public meeting to present the DIP for information and cooperation.

    Refer to page 21 for public comment period steps.

16. **Respond to public comments on draft DIP if needed.** (WQ lead)

17. **Publish and distribute DIP.** (WQ lead) - *See pg. 15 – Submittal report procedure.*
    - Distribute final DIP
    - Publicize as needed

18. **Submit DIP to HQ Coordinator for EPA.** (WQ lead)

19. **Regional staff continues to work with locals to ensure implementation and resulting clean up of waterbodies.** Some TMDL implementation plans may span over a century!

Implement the TMDL and Effectiveness Monitoring – Year 5

Considerable work remains at this point. Implementation has begun, but results may not be measurable for some time. Effectiveness monitoring and adaptive management are crucial to the success of a TMDL. Without it we will not know if the TMDL is working and we will be unable to make the necessary adjustments to achieve clean water. There will be a need for continual "oversight" of the TMDL Plan and associated adaptive management for years to come.

1. **Implement point source pollution controls.** (WQP)
    - Issue NPDES permits for point source dischargers with TMDL allocations
    - Work with Toxics Cleanup Program

2. **Implement nonpoint source pollution controls.** (WQP)
    - Continue early implementation – BMPs
    - Implement other nonpoint source controls from the DIP
    - Administer grants and loans to implementation groups
    - Publicize partnerships
    - Prepare periodic status reports

3. **Implement effectiveness monitoring plan.** (EAP)
    - Coordinate with WQP
    - Coordinate with schools and other volunteers (lake associations, stream teams, etc.)
    - Follow up on implementation of cleanup plan – review plans, check in with parties and their commitments
    - Initiate adaptive management process if load allocations and WQS are not being met
    - Prepare updates of project status and the results of the monitoring

4. **Reevaluate water quality after TMDL implementation** and make adjustments to DIP as needed. (WQ lead)

5. **Adaptive Management.** (WQ lead) Revise implementation strategies if water quality is not improving.

6. **Publicize successes.** (WQ lead, PI person & PIO)
    - Incremental improvements
    - Partnerships formed
    - Stewardship efforts

7. **Achieve Water Quality Standards!!!!**